



Shyamal Peddada, Ph.D.

Biostatistics Branch

(919)-541-1122

peddada@niehs.nih.gov

Printable [PDF](#) version of this page.

Education:

Ph.D.	1983	Department of Mathematics and Statistics, University of Pittsburgh, Pittsburgh, PA
M.Sc.	1980	Indian Agricultural Research Institute, New Delhi
B.Sc. (HONS)	1977	Mathematics, University of Delhi, New Delhi.

I direct the [Statistical Consulting Service](#) offered by the biostatistics branch to researchers in the DIR. My responsibilities include helping a researcher with study design, statistical analysis and interpretation of data. As need arises, I develop new statistical procedures for analyzing data generated by researchers at NIEHS. For instance, I am currently developing statistical procedures for analyzing NTP rodent bioassay data. I am also interested in the analysis of microarray data. I am working on statistical procedures for analyzing gene expression data obtained from time-course and dose-response microarray experiments.

Awards/Honors:

American Statistical Association's Outstanding Statistical Application Award, 1997.
Nominated for the Excellence in Teaching Award, Central Michigan University, 1985.
Indian Council for Agricultural Research, Junior Research Fellow, 1977.
Indian Agricultural Statistics Research Institute, Junior Research Fellow, 1977-1979.

Professional Memberships:

International Biometric Society.
American Statistical Association.
Institute of Mathematical Statistics.

A Selection of Relevant Publications:

Hwang, J. T. G., and Peddada, S. D. (1994). Confidence Interval Estimation Subject to Order Restrictions. *Annals*

of Statistics, 22, 67-93.

Peddada, S. D., Prescott, K., and Conaway, M. (2001). Tests for Order Restrictions in Binary Data. *Biometrics*, 57, 1219-1227.

Hoferkamp, C., and Peddada, S. D. (2002). Estimation of parameters in linear models with heteroscedastic variances subject to order restrictions. *Jour. of Multivariate Analysis*, 82, 65-87.

Kanno, J., Onyon, L., Peddada, S. D., Ashby, J., Jacob, E., and Owens, W., (2002). The OECD program to validate the uterotrophic bioassay: Phase Two - Dose Response Studies. *Environmental Health Perspectives*, 111, 1530-1549.

Kanno, J., Onyon, L., Peddada, S. D., Ashby, J., Jacob, E., and Owens, W., (2002). The OECD program to validate the rat uterotrophic bioassay: Phase Two - Coded Single Dose Studies. *Environmental Health Perspectives*, 111, 1550-1558.

Chan, P, Mahler, J., Peddada, S. D., Lomnitski, L., and Nyska, A. (2003). Forestomach tumor induction by 2,4-hexadienal in F344/N rats and B6C3F1 mice. *Archives of Toxicology*, 77, 511-520.

Peddada, S. D., Lobenhofer, L., Li, L., Afshari, C., Weinberg, C., and Umbach, D., (2003). Gene selection and clustering for time-course and dose-response microarray experiments using order-restricted inference. *Bioinformatics*, 19, 834-841.

Liu, D., Weinberg, C. and Peddada, S. D. (2004). A geometric approach to determine association and coherence of the activation times of cell-cycling genes under different experimental conditions. *Bioinformatics*, in press.

Jarosinska, D., Peddada, S. D. and Rogan, W. (2004). Assessment of lead exposure and associated risk factors in urban children in Silesia, Poland. *Environmental Research*, 95, 133-142.

Shabat, S., Nyska, A., Long, P., Goelman, G., Abramovitch, R., Ezov, N., Levin-Harus, T., Peddada, S. D., Redlich, M., Yedgar, S., Nyska, M. (2004). Osteonecrosis in a chemically induced rat model of human hemolytic disorders associated with thrombosis - A new model for avascular necrosis of bone. *Calcified Tissue International*, 74, 220-228.

Liu, D., Umbach, D., Peddada, S. D., Li, L., Crockett, P., and Weinberg, C. (2004). A Random-Periods Model for Expression of Cell-Cycle Genes. *Proc. of National Acad. of Sci.*, 101, No. 19, 7240-7245.

Peddada, S. D., Haseman, J., and Dinse, G. (2004). A survival-adjusted quantal response test for comparing tumor incidence rates. *Jour. Royal Statist. Soc., Ser - C*, in press.

Bishop, J., Tani, Y., Witt, K., Johnson, J., Peddada, S. D., Dunnick, J. and Nyska, A. (2004). Mitochondrial damage revealed by morphometric and semiquantitative analysis of mouse pup cardiomyocytes following in utero and postnatal exposure to Zidovudine and Larnivudine. *Toxicological Sciences*, in press.

Gray, T., Nettesheim, P., Loftin, C., Koo, J., Bonner, J., Peddada, S. D., and Langenbach, R. (2004), IL-1b induced mucin production in human airway epithelium is mediated by PGE₂ receptors and cAMP-PKA signaling. *Molecular Pharmacology*, in press.

Wormser, U., Lagenbach, R., Peddada, S. D., Sintov, A., Bordsky, B and Nyska, A., (2004). Reduced sulfur mustard-induced skin toxicity in cyclooxygenase-2 knockout and celecoxib-treated mice. Toxicology and Applied Pharmacology, in press.

Biostatistics Branch,
Environmental Diseases and Medicine Program,
Division of Intramural Research,
National Institute of Environmental Health Sciences,
National Institutes of Health,
Department of Health and Human Services.

Please send any comments, corrections, or inquiries regarding this page to [Bill qb Quattlebaum \(quattleb@niehs.nih.gov\)](mailto:quattleb@niehs.nih.gov).